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BOOK REVIEW

Michigan Flora, Part III, Dicots (Pyrolaceae—Compositae) by Edward G. Voss. 1996. xix + 622 pp. 771 maps, 266 line drawings, 8 color plates. \$15.00 (cloth). Cranbrook Institute of Science Bulletin 61 and University of Michigan Herbarium, Ann Arbor, MI.

Part of a project begun more than 40 years ago, this book completes a monumental study of the seed plants of Michigan. *Michigan Flora, Part III*, by Edward G. Voss, is an excellent book in an excellent series. *Part I* (Voss 1972) covered the gymnosperms and monocots, *Part II* (Voss 1985), the apetalous and polypetalous dicots, *Part III*, the sympetalous dicots. Save for the absence of the pteridophytes from the Michigan series, its three parts parallel both in coverage and family sequence the three volumes of Gleason's (1952) *New Britton and Brown Illustrated Flora*.

In the course of the requisite research for the three books, Voss studied more than a quarter million specimens collected from Michigan during the 19th and 20th centuries. He estimates that the number of Michigan specimens in the state's several herbaria has more than doubled over the past 40 years. A similar estimate would likely be valid for most states of the Midwest. In all, the three books contain county dot distribution maps for ca. 2,450 species, each dot substantiated by at least one of the herbarium specimens. The maps are rich with dots, and the distribution patterns they display are interesting and in some cases provocative. They remind one of the need for an atlas of plant distribution covering all the states of the *Gray's Manual* range (Fernald 1950).

Michigan Flora, Part III treats the plants of 33 dicot families, those of the large family Compositae or Asteraceae occupying about 40% of the taxonomic text. The text includes thorough, usually multi-charactered, dichotomous keys for species identification. The keys are often augmented by discussion of additional character-state differences, combinations, and nuances that further serve to distinguish the various species, hybrids, and infraspecific taxa. The comprehensive habitat statements will also, in some

cases, aid in the identification of unknowns. About one-third of the species are illustrated by habit sketches and/or drawings of diagnostic morphological details. The taxonomic section opens with eight plates of attractive color photographs of some 50 of the species. The section closes with a set of master keys to families and to special groups, e.g., aquatic plants, woody plants, covering all three parts of the *Michigan Flora*.

Nuggets abound in the discussion of individual genera and species. A few examples are: a brief history of the harvesting of floss from the seeds of common milkweed during World War II by the "Milkweed Floss Division of War Hemp Industries," headquartered at Petoskey, Michigan; the speculation that *Cynoglossum boreale* was the blue-flowered borage noted by Henry David Thoreau during his travels in Michigan in 1861; a discussion of the commercial growing of peppermint in Michigan, including notes on the establishment of the town of Mentha—whose post office closed in 1954; the observation that in most Michigan species of *Viburnum* a fruit is purple-black when mature, "although it may be red when it is green" (ouch!); some thoughts on the gender of the generic name *Bidens*; a discourse on taxonomic problems in the genus *Aster*; and the comments on the "tragic spread" of the European thistle *Cirsium palustre* into natural wetlands.

The three-part *Michigan Flora* will be of great value to professional botanists and botany students dealing with plants of the Midwest, the Northeast, and Ontario. It will be of great utility to all individuals whose interest or work brings them into contact with the region's plant life, such as those concerned with the identity of plants growing in wetlands or lakes, the occurrence of trees or wildflowers, the relationship between plants and insects or between plants and soils, and the preservation of rare species or important natural areas. "A flora," as Voss writes, "is an inventory or census of a basic resource."

LITERATURE CITED

- FERNALD, M. L. 1950. Gray's Manual of Botany, 8th ed. American Book Co., New York.
- GLEASON, H. A. 1952. The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada. The New York Botanical Garden, Bronx, NY. 3 vol.
- VOSS, E. G. 1972. Michigan Flora, Part I, Gymnosperms and Monocots.

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NOTE: Parts I and II are available for \$12.50 each from the Cranbrook Institute of Science, 1221 N Woodward Ave., P.O. Box 801, Bloomfield, MI 48303-0801 (phone 810-645-3239 or 810-645-3203).—*Ed.*